



May 19, 2015

ALS1505122

Ft. Collins, Colorado

LIMS Version: 6.761

Page 1 of 1

Tuesday, May 19, 2015

Bob Evans
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1505122
Project Name: 200W Pump & Treat - Treatment Plant Water Sampling
Project Number: F15-005

Dear Mr. Evans:

Five water samples were received from CH2M HILL Plateau Remediation Company, on 5/7/2015. The samples were scheduled for the following analysis:

Metals

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Julie Ellingson
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New Jersey (NJ)	CO003
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

May 19, 2015

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ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1505122

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: 200W Pump & Treat - Treatment Plant Water Sampling

Client Project Number: F15-005

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B31BY0	1505122-1		WATER	06-May-15	10:50
B31BY6	1505122-2		WATER	06-May-15	8:35
B31C01	1505122-3		WATER	06-May-15	8:35
B31C06	1505122-4		WATER	06-May-15	9:55
B31C15	1505122-5		WATER	06-May-15	9:25

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-005-156	PAGE 1 OF 1																								
COLLECTOR <i>Chapel</i> <i>T. Bacon</i>	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR EVANS, RT																								
SAMPLING LOCATION 289-T, Influent Tank, Valve V12-Y30	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling	SAF NO. F15-005	PRICE CODE 7C																								
ICE CHEST NO. <i>GWS-485</i>	FIELD LOGBOOK NO. <i>HNF-N-4515/132</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	AIR QUALITY <input type="checkbox"/>																								
SHIPPED TO ALS Environmental Ft. Collins	OFFSITE PROPERTY NO. <i>5614</i>	COA 303700	METHOD OF SHIPMENT FEDERAL EXPRESS																								
BILL OF LADING/AIR BILL NO. <i>7735 4280 3381</i>		ORIGINAL																									
<table border="1"> <thead> <tr> <th>MATRIX*</th> <th>POSSIBLE SAMPLE HAZARDS/ REMARKS</th> <th>PRESERVATION</th> <th>HNO3 to pH</th> </tr> </thead> <tbody> <tr> <td>A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SF=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other</td> <td>*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.</td> <td>HOLDING TIME 6 Months</td> <td><2</td> </tr> <tr> <td></td> <td>TYPE OF CONTAINER</td> <td>G/P</td> <td></td> </tr> <tr> <td></td> <td>NO. OF CONTAINER(S)</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td>VOLUME</td> <td>500ml</td> <td></td> </tr> <tr> <td></td> <td>SAMPLE ANALYSIS</td> <td>SEE ITEM (1) IN SPECIAL INSTRUCTIONS</td> <td></td> </tr> </tbody> </table>				MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HNO3 to pH	A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SF=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	HOLDING TIME 6 Months	<2		TYPE OF CONTAINER	G/P			NO. OF CONTAINER(S)	1			VOLUME	500ml			SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HNO3 to pH																								
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	TYPE OF CONTAINER	G/P																									
	NO. OF CONTAINER(S)	1																									
	VOLUME	500ml																									
	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																									
SPECIAL HANDLING AND/OR STORAGE N/A																											
SAMPLE NO. B31BY0	MATRIX* WATER	SAMPLE DATE MAY 06 2015	SAMPLE TIME 1050																								

①

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>T. Bacon</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>R.A. Shepherd</i>	DATE/TIME MAY 06 2015 1130	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-077 (1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON {Add-on} {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON {Add-on} {Boron};	
RELINQUISHED BY/REMOVED FROM <i>R.A. Shepherd</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>PEDEX</i>	DATE/TIME MAY 06 2015 1130		
RELINQUISHED BY/REMOVED FROM <i>PEDEX</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>Travis C. Humber</i>	DATE/TIME MAY 06 2015 1130		
RELINQUISHED BY/REMOVED FROM <i>PEDEX</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>Travis C. Humber</i>	DATE/TIME MAY 06 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-077	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
DISPOSAL METHOD	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

PRINTED ON 4/29/2015

A-6003-618 (REV 2)

May 19, 2015

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CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F15-005-162	PAGE 1 OF 1
COLLECTOR <i>T. Breon</i>	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR EVANS, RT		PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION 289-T, Effluent Tank, Valve V07-Y80D -- DUP	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F15-005		AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT FEDERAL EXPRESS	
ICE CHEST NO. <i>GW05-485</i>	FIELD LOGBOOK NO. <i>HNE-NL 4419/132</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 303700		ORIGINAL		
SHIPPED TO ALS Environmental Ft. Collins	OFFSITE PROPERTY NO. <i>5614</i>		BILL OF LADING/AIR BILL NO. <i>773542803381</i>				
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Soil O=Oil T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION HNO3 to pH <2	HOLDING TIME 6 Months	TYPE OF CONTAINER G/P		
SPECIAL HANDLING AND/OR STORAGE N/A		NO. OF CONTAINER(S) 1	VOLUME 500mL		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO. B31BY6	MATRIX* WATER	SAMPLE DATE MAY 06 2015	SAMPLE TIME 0835	✓			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>T. Breon</i>	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN CHPRC	DATE/TIME MAY 06 2015	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-077	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN FEDEX	DATE/TIME MAY 06 2015	(1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron};	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN CHPRC	DATE/TIME MAY 06 2015	TRVL-15-077	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RECEIVED BY LABORATORY SECTION	TITLE		DATE/TIME		
DISPOSAL METHOD DISPOSITION	DISPOSED BY		DATE/TIME		
PRINTED ON 4/29/2015					

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F15-005-167	PAGE 1 OF 1
COLLECTOR <i>CHRC</i> <i>T. Bacon</i>	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days		
SAMPLING LOCATION 289-T, Effluent Tank, Valve V07-Y80D	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling	SAF NO. F15-005		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. <i>6W5-485</i>	FIELD LOGBOOK NO. <i>HNF-N-451-5/12</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 303700	METHOD OF SHIPMENT FEDERAL EXPRESS			
SHIPPED TO ALS Environmental Ft. Collins	OFFSITE PROPERTY NO. <i>5614</i>	BILL OF LADING/AIR BILL NO. <i>77354280 3381</i>					
MATRIX* A=Air DL=Drum L=Liquid DS=Drum Solids L=Liquid O=Oil S=Soil SF=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION HNO3 to pH <2	HOLDING TIME 6 Months	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 500ml	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE N/A							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B31C01	WATER	MAY 06 2015	0835	✓			

③

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>T. Bacon</i>	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN <i>L.D. Wall</i>	DATE/TIME MAY 06 2015	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-077 (1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron};	
RELINQUISHED BY/REMOVED FROM <i>L.D. Wall</i>	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN FEDEX	DATE/TIME MAY 06 2015		
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME MAY 06 2015	RECEIVED BY/STORED IN <i>CHRC</i>	DATE/TIME MAY 06 2015		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-077	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

PRINTED ON 4/29/2015

A-6003-618 (REV 2)

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CH2M HILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F15-005-172	PAGE 1 OF 1
COLLECTOR <i>T. Bacor</i>	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR EVANS, RT		PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION 289-TA, Pre-Resin Tanks, Valve V05-Y20	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling	FIELD LOGBOOK NO. <i>HNF-N-451-5/132</i>		SAF NO. F15-005	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT FEDERAL EXPRESS	
ICE CHEST NO. <i>6U05-485</i>	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 303700	BILL OF LADING/AIR BILL NO. <i>77354280 3381</i>			
SHIPPED TO ALS Environmental Ft. Collins	OFFSITE PROPERTY NO. <i>5614</i>						
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Soil O=Oil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/REMARKS *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION HNO3 to pH <2	HOLDING TIME 6 Months	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 500ml	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE N/A							
SAMPLE NO. B31C06	MATRIX* WATER	SAMPLE DATE MAY 06 2015	SAMPLE TIME 0955	✓			

(4)

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>T. Bacor</i>	DATE/TIME MAY 06 2015 1030	RECEIVED BY/STORED IN <i>LD Wall</i>	DATE/TIME MAY 06 2015 1030	SPECIAL INSTRUCTIONS ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-077 (1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron};	
RELINQUISHED BY/REMOVED FROM <i>LD Wall</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME MAY 06 2015 1400		
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME MAY 06 2015 1400	RECEIVED BY/STORED IN <i>57-15 0935</i>	DATE/TIME MAY 06 2015 1400		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15- U77	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

PRINTED ON 4/29/2015

A-6003-618 (REV 2)

May 19, 2015

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CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F15-005-181	PAGE 1 OF 1
COLLECTOR <i>T Bacon</i>	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days		
SAMPLING LOCATION 289-TA, Post-Resin Tanks, Valve V06-Y22	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling			SAF NO. F15-005	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-485</i>	FIELD LOGBOOK NO. <i>F15-N-485-5/13</i>	ACTUAL SAMPLE DEPTH N/A	COA 303700	METHOD OF SHIPMENT FEDERAL EXPRESS		ORIGINAL	
SHIPPED TO ALS Environmental Ft. Collins	OFFSITE PROPERTY NO. <i>5614</i>	BILL OF LADING/AIR BILL NO. <i>77354280 3381</i>					
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Solid L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION HNO3 to pH <2	HOLDING TIME 6 Months	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 500ml	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE N/A							
SAMPLE NO. B31C15	MATRIX* WATER	SAMPLE DATE MAY 06 2015	SAMPLE TIME 0925				

1505122

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-15-077
(1) 6020_METALS_ICPMS: COMMON {Aluminum, Chromium, Cobalt, Copper, Molybdenum, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Manganese, Nickel, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Calcium, Iron, Magnesium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Boron};

TRVL-15- 077

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		DATE/TIME	
RELINQUISHED BY/REMOVED FROM <i>T Bacon</i>	RECEIVED BY/STORED IN CHPRC	<i>L.D. Wall</i>	MAY 06 2015	1030	
RELINQUISHED BY/REMOVED FROM L.D. Wall	RECEIVED BY/STORED IN FEDEX	<i>Chadwick</i>	MAY 06 2015	1400	
RELINQUISHED BY/REMOVED FROM <i>600 EX</i>	RECEIVED BY/STORED IN	<i>Chadwick</i>	MAY 06 2015	1400	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		DATE/TIME	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			

DATE/TIME

DATE/TIME

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A-6003-618 (REV 2)

ALS1505122



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHR

Workorder No: 1505122

Project Manager: JE

Initials: CDT Date: 5-7-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	NO
2. Are custody seals on shipping containers intact?	NONE	YES	NO
3. Are Custody seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		YES	NO
5. Are the COC and bottle labels complete and legible?		YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		YES	NO
12. Are all samples within holding times for the requested analyses?		YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: _____ < green pea _____ > green pea	N/A	YES	NO
15. Do any water samples contain sediment? Amount of sediment: _____ dusting _____ moderate _____ heavy	Amount N/A	YES	NO
16. Were the samples shipped on ice?		YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>Am 5</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>11</u>			
Background µR/hr reading: <u>12</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES / NO / NA (If no, see Form 008.))			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO (NA) Contact: _____ Date/Time: _____

Project Manager Signature / Date: U/E 5/7/15

May 19, 2015

ALS1505122

From: (509) 373-7409
Barbara Briggs
CH2M
6267 Latah St

Origin ID: PSCA

FedEx
Express



J151215022303uv

Richland, WA 99354

SHIP TO: (970) 490-1511

BILL THIRD PARTY

Julie Ellingson
ALS Global
225 Commerce Drive

FORT COLLINS, CO 80524

Ship Date: 06MAY15
ActWgt: 24.0 LB
CAD: 10706051/NET3610

1505122

11
-2

Delivery Address Bar Code



Ref # GWS-485 (5614)
Invoice #
PO #
Dept #

Ans

THU - 07 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 7735 4280 3381
0201

DSR
80524
CO-US
DEN



XH FTCA



537J1ZSE2JEE4B

After printing this label

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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Metals

Case Narrative

CH2M HILL Plateau Remediation Company

200W Pump & Treat – Treatment Plant Water Sampling -- F15-005

Work Order Number: 1505122

1. This report consists of 5 water samples.
2. The samples were received intact at ambient temperature by ALS on 05/07/15.
3. The samples had a pH less than 2 upon receipt.
4. The samples were prepared and analyzed based on SW-846, 3rd Edition procedures.

For analysis by Trace ICP and ICP-MS, the samples were digested following method 3005A and the current revision of SOP 806.

5. Analysis by Trace ICP followed method 6010B and the current revision of SOP 834.

Analysis by ICP-MS followed method 6020A and the current revision of SOP 827.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.
7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.
 - A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in this digestion batch.
 - The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes. Boron and copper have results above the MDL. Sample results have been compared to the blank results.



- All laboratory control sample criteria were met.
- All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.
- The interference check samples and high standard readbacks associated with Method 6010B were within acceptance criteria.
- The interference check samples associated with Method 6020A were analyzed.

9. Matrix specific quality control procedures.

Sample 1505122-1 was designated as the quality control sample for each analysis.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A sample duplicate and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
- A serial dilution was analyzed with each ICP batch. All acceptance criteria were met.

10. It is a standard practice that samples for ICP-MS are analyzed at a dilution. The 10X factor can be considered an artifact of the prep and does not indicate a secondary dilution and is therefore not flagged as a dilution.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Jill Latelle
Inorganics Primary Data Reviewer

5/15/15
Date



Arthur E. Elgin
Inorganics Final Data Reviewer

5/15/15
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used as needed by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A "B" is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a "U" is entered. For samples, negative values are reported as non-detects ("U" flagged). For blanks, if the absolute value of the negative value is above the MDL and below the reporting limit, then the result is "B" flagged.
- QC qualifier -- Specified entries and their meanings are as follows:
 - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 - M - Duplicate injection precision was not met.
 - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.
 - C - The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 5X$ the blank concentration.
 - D - Analyte was reported at a secondary dilution factor, typically $DF > 1$ (i.e., the primary preparation required dilution to either bring the analyte within the calibration range or to minimize interference). Required for organics/wetchem if the sample was diluted.

May 19, 2015

ALS1505122

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31BY0
Lab ID: 1505122-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-May-15
Date Extracted: 12-May-15
Date Analyzed: 13-May-15
Prep Method: SW3005 Rev A

Prep Batch: IP150512-2
QCBatchID: IP150512-2-5
Run ID: IT150513-1A5
Cleanup: NONE
Basis: As Received
File Name: 150513A.

Analyst: Steve Workman
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	33	30	6.8		
7440-70-2	CALCIUM	1	64000	1000	18		
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	21000	750	22		
7440-09-7	POTASSIUM	1	5100	1000	190		
7440-23-5	SODIUM	1	17000	500	49		

Data Package ID: IT1505122-1

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ALS1505122

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31BY6
Lab ID: 1505122-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-May-15
Date Extracted: 12-May-15
Date Analyzed: 13-May-15
Prep Method: SW3005 Rev A

Prep Batch: IP150512-2
QCBatchID: IP150512-2-5
Run ID: IT150513-1A5
Cleanup: NONE
Basis: As Received
File Name: 150513A.

Analyst: Steve Workman
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	41	30	6.8		
7440-70-2	CALCIUM	1	59000	1000	18		
7439-89-6	IRON	1	25	50	16	B	
7439-95-4	MAGNESIUM	1	20000	750	22		
7440-09-7	POTASSIUM	1	5600	1000	190		
7440-23-5	SODIUM	1	17000	500	49		

Data Package ID: IT1505122-1

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ALS1505122

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C01
Lab ID: 1505122-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-May-15
Date Extracted: 12-May-15
Date Analyzed: 13-May-15
Prep Method: SW3005 Rev A

Prep Batch: IP150512-2
QCBatchID: IP150512-2-5
Run ID: IT150513-1A5
Cleanup: NONE
Basis: As Received
File Name: 150513A.

Analyst: Steve Workman
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	45	30	6.8		
7440-70-2	CALCIUM	1	62000	1000	18		
7439-89-6	IRON	1	25	50	16	B	
7439-95-4	MAGNESIUM	1	21000	750	22		
7440-09-7	POTASSIUM	1	4800	1000	190		
7440-23-5	SODIUM	1	17000	500	49		

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ALS1505122

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C06
Lab ID: 1505122-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-May-15
Date Extracted: 12-May-15
Date Analyzed: 13-May-15
Prep Method: SW3005 Rev A

Prep Batch: IP150512-2
QCBatchID: IP150512-2-5
Run ID: IT150513-1A5
Cleanup: NONE
Basis: As Received
File Name: 150513A.

Analyst: Steve Workman
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	6.8	30	6.8	U	
7440-70-2	CALCIUM	1	67000	1000	18		
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	21000	750	22		
7440-09-7	POTASSIUM	1	5400	1000	190		
7440-23-5	SODIUM	1	25000	500	49		

Data Package ID: IT1505122-1

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ALS1505122

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C15
Lab ID: 1505122-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-May-15
Date Extracted: 12-May-15
Date Analyzed: 13-May-15
Prep Method: SW3005 Rev A

Prep Batch: IP150512-2
QCBatchID: IP150512-2-5
Run ID: IT150513-1A5
Cleanup: NONE
Basis: As Received
File Name: 150513A.

Analyst: Steve Workman
Sample Aliquot: 50 ml
Final Volume: 50 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	6.8	30	6.8	U	
7440-70-2	CALCIUM	1	66000	1000	18		
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	22000	750	22		
7440-09-7	POTASSIUM	1	5600	1000	190		
7440-23-5	SODIUM	1	29000	500	49		

Data Package ID: IT1505122-1

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ALS1505122

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31BY0

Lab ID: 1505122-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

File Name: 085SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	24	10	0.74		
7440-48-4	COBALT	10	0.21	1	0.21	U	
7440-50-8	COPPER	10	2	8	2	U	
7439-96-5	MANGANESE	10	0.74	5	0.74	U	
7439-98-7	MOLYBDENUM	10	2.9	1	0.44		
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	3.2	1	0.42		
7440-61-1	URANIUM	10	1.2	0.1	0.046		
7440-66-6	ZINC	10	7.1	20	7.1	U	

Data Package ID: Im1505122-1

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ALS1505122

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31BY6

Lab ID: 1505122-2

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

File Name: 090SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	3.5	10	0.74	B	
7440-48-4	COBALT	10	14	1	0.21		
7440-50-8	COPPER	10	2	8	2	U	
7439-96-5	MANGANESE	10	100	5	0.74		
7439-98-7	MOLYBDENUM	10	29	1	0.44		
7440-02-0	NICKEL	10	6.9	5	2.3		
7782-49-2	SELENIUM	10	2.6	1	0.42		
7440-61-1	URANIUM	10	0.94	0.1	0.046		
7440-66-6	ZINC	10	8.9	20	7.1	B	

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ALS1505122

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C01

Lab ID: 1505122-3

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

File Name: 094SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	3.9	10	0.74	B	
7440-48-4	COBALT	10	36	1	0.21		
7440-50-8	COPPER	10	2	8	2	U	
7439-96-5	MANGANESE	10	300	5	0.74		
7439-98-7	MOLYBDENUM	10	29	1	0.44		
7440-02-0	NICKEL	10	14	5	2.3		
7782-49-2	SELENIUM	10	2	1	0.42		
7440-61-1	URANIUM	10	0.97	0.1	0.046		
7440-66-6	ZINC	10	8.2	20	7.1	B	

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ALS1505122

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C06

Lab ID: 1505122-4

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

File Name: 095SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	47	10	0.74		
7440-48-4	COBALT	10	0.21	1	0.21	U	
7440-50-8	COPPER	10	2	8	2	U	
7439-96-5	MANGANESE	10	0.74	5	0.74	U	
7439-98-7	MOLYBDENUM	10	3.7	1	0.44		
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	3.1	1	0.42		
7440-61-1	URANIUM	10	1.8	0.1	0.046		
7440-66-6	ZINC	10	7.1	20	7.1	U	

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ALS1505122

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Field ID: B31C15

Lab ID: 1505122-5

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

File Name: 096SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	37	10	0.74		
7440-48-4	COBALT	10	0.21	1	0.21	U	
7440-50-8	COPPER	10	2	8	2	U	
7439-96-5	MANGANESE	10	0.74	5	0.74	U	
7439-98-7	MOLYBDENUM	10	2.9	1	0.44		
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	2.6	1	0.42		
7440-61-1	URANIUM	10	1.9	0.1	0.046		
7440-66-6	ZINC	10	7.1	20	7.1	U	

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ALS1505122

ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150512-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Batch: IP150512-2

QCBatchID: IP150512-2-5

Run ID: IT150513-1A5

Cleanup: NONE

Basis: N/A

File Name: 150513A.

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-42-8	BORON	1	-16	30	6.8	B	
7440-70-2	CALCIUM	1	18	1000	18	U	
7439-89-6	IRON	1	16	50	16	U	
7439-95-4	MAGNESIUM	1	22	750	22	U	
7440-09-7	POTASSIUM	1	190	1000	190	U	
7440-23-5	SODIUM	1	49	500	49	U	

Data Package ID: IT1505122-1

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ALS1505122

ICP Metals

Method SW6010B

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150512-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/12/2015

Date Analyzed: 05/13/2015

Prep Method: SW3005A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-5

Run ID: IT150513-1A5

Cleanup: NONE

Basis: N/A

File Name: 150513A.

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-42-8	BORON	1000	1140	30		114	80 - 120%
7440-70-2	CALCIUM	40000	41300	1000		103	80 - 120%
7439-89-6	IRON	1000	1010	50		101	80 - 120%
7439-95-4	MAGNESIUM	40000	40700	750		102	80 - 120%
7440-09-7	POTASSIUM	40000	41300	1000		103	80 - 120%
7440-23-5	SODIUM	40000	41500	500		104	80 - 120%

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ALS1505122

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B31BY0

LabID: 1505122-1MS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-5

Run ID: IT150513-1A5

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 150513A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-42-8	BORON	33		1150		30	1000	111	80 - 120%
7440-70-2	CALCIUM	64000		102000		1000	40000	96	80 - 120%
7439-89-6	IRON	16	U	960		50	1000	96	80 - 120%
7439-95-4	MAGNESIUM	21000		60500		750	40000	97	80 - 120%
7440-09-7	POTASSIUM	5100		48500		1000	40000	109	80 - 120%
7440-23-5	SODIUM	17000		62000		500	40000	112	80 - 120%

Field ID: B31BY0

LabID: 1505122-1MSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-5

Run ID: IT150513-1A5

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 150513A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-42-8	BORON	1170		1000	114	30	20	2
7440-70-2	CALCIUM	106000		40000	106	1000	20	4
7439-89-6	IRON	982		1000	98	50	20	2
7439-95-4	MAGNESIUM	61600		40000	100	750	20	2
7440-09-7	POTASSIUM	48600		40000	109	1000	20	0
7440-23-5	SODIUM	62200		40000	113	500	20	0

Data Package ID: IT1505122-1

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ALS1505122
ICPMS Metals
Method SW6020A
Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FP150512-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: N/A

File Name: 082SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	19	50	19	U	
7440-47-3	CHROMIUM	10	0.74	10	0.74	U	
7440-48-4	COBALT	10	0.21	1	0.21	U	
7440-50-8	COPPER	10	-4.6	8	2	B	
7439-96-5	MANGANESE	10	0.74	5	0.74	U	
7439-98-7	MOLYBDENUM	10	0.44	1	0.44	U	
7440-02-0	NICKEL	10	2.3	5	2.3	U	
7782-49-2	SELENIUM	10	0.42	1	0.42	U	
7440-61-1	URANIUM	10	0.046	0.1	0.046	U	
7440-66-6	ZINC	10	7.1	20	7.1	U	

Data Package ID: Im1505122-1

Date Printed: Friday, May 15, 2015

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ALS1505122
ICPMS Metals
Method SW6020A
Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-005

Lab ID: FM150512-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/12/2015

Date Analyzed: 05/13/2015

Prep Method: SW3005A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: N/A

File Name: 084SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7429-90-5	ALUMINUM	5000	4740	50		95	80 - 120%
7440-47-3	CHROMIUM	500	476	10		95	80 - 120%
7440-48-4	COBALT	100	97.5	1		98	80 - 120%
7440-50-8	COPPER	1000	968	8		97	80 - 120%
7439-96-5	MANGANESE	100	96.5	5		97	80 - 120%
7439-98-7	MOLYBDENUM	100	94.9	1		95	80 - 120%
7440-02-0	NICKEL	500	496	5		99	80 - 120%
7782-49-2	SELENIUM	100	95.8	1		96	80 - 120%
7440-61-1	URANIUM	10	9.79	0.1		98	80 - 120%
7440-66-6	ZINC	2000	1940	20		97	80 - 120%

Data Package ID: *Im1505122-1*

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ALS1505122

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B31BY0

LabID: 1505122-1MS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 088SMPL_

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	19	U	5060		50	5000	101	75 - 125%
7440-47-3	CHROMIUM	24		500		10	500	95	75 - 125%
7440-48-4	COBALT	0.21	U	98.3		1	100	98	75 - 125%
7440-50-8	COPPER	2	U	969		8	1000	97	75 - 125%
7439-96-5	MANGANESE	0.74	U	99.1		5	100	99	75 - 125%
7439-98-7	MOLYBDENUM	2.9		100		1	100	97	75 - 125%
7440-02-0	NICKEL	2.3	U	491		5	500	98	75 - 125%
7782-49-2	SELENIUM	3.2		99.2		1	100	96	75 - 125%
7440-61-1	URANIUM	1.2		11.3		0.1	10	102	75 - 125%
7440-66-6	ZINC	7.1	U	1980		20	2000	99	75 - 125%

Data Package ID: Im1505122-1

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May 19, 2015

ALS1505122

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1505122

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: 200W Pump & Treat - Treatment Plant Water Sampling F15-

Field ID: B31BY0

LabID: 1505122-1MSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 06-May-15

Date Extracted: 12-May-15

Date Analyzed: 13-May-15

Prep Method: SW3005 Rev A

Prep Batch: IP150512-2

QCBatchID: IP150512-2-2

Run ID: IM150513-11A4

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 089SMPL_

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	4730		5000	95	50	20	7
7440-47-3	CHROMIUM	497		500	95	10	20	1
7440-48-4	COBALT	96.6		100	97	1	20	2
7440-50-8	COPPER	940		1000	94	8	20	3
7439-96-5	MANGANESE	97		100	97	5	20	2
7439-98-7	MOLYBDENUM	99.1		100	96	1	20	1
7440-02-0	NICKEL	486		500	97	5	20	1
7782-49-2	SELENIUM	101		100	98	1	20	2
7440-61-1	URANIUM	10.8		10	96	0.1	20	5
7440-66-6	ZINC	1920		2000	96	20	20	3

Data Package ID: Im1505122-1

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